



**King County**

Department of Natural Resources and Parks

**Wastewater Treatment Division**

# November-December Storm Recap

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Metropolitan Water Pollution  
Abatement Advisory Committee

February 7, 2007

# November 2006 – Wettest Month on Record

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- King County's system did not experience any sanitary sewer overflows, despite high flow volumes
  - Heaviest rain was Nov. 1-7
  - West Point and South plants handled record flows without incident
    - On multiple days, both plants reached or exceeded their maximum capacity (440 mgd for West Point, 325 mgd for South Plant)
  - All four of King County's Combined Sewer Overflow (CSO) treatment facilities were operating – Carkeek, Alki, Elliot West, and Henderson.
  - Many of the pump stations were running at capacity for days without a significant equipment failure.

# Dec. 14/15 Storm Event

## West Point Treatment Plant

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- Multiple power fluctuations caused a loss of computer control, which resulted in multiple pump shutdowns
  - One of the two emergency bypass gates failed to open, influent overflowed the primary sedimentation area
  - Severe flooding occurred in primary area and equipment tunnel
  - Event resulted in the bypass of about 59 million gallons dilute, untreated wastewater
  - Plant lost treatment capability at 7 p.m.
  - Crews restored primary treatment at 11 p.m.
  - Plant resumed full secondary treatment at 8:30 a.m. on Dec. 15

# O&M staff kept the plant running despite equipment damage, flooding



# Barton PS was the most severely affected off-site facility – Dec. 14 and 15

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- Pump station affected after power failure
- Overflowed for about 29 hours
- Emergency pump station installed
- Facility fully functional in 30 hours





# North Mercer Interceptor Rupture

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- Flow surge ruptured 18" sewer line causing sinkholes
- Temporary bypass line installed 1/5
- Construction to replace pipe to begin in late January
- KC and City of Mercer Island working closely





# 20 Pump Stations Lost Power and Operated with Emergency Generators

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- Extended power outage necessitated multiple refuelings in adverse conditions
- Multiple generator breakdowns were quickly repaired
- 11 sanitary sewer overflows occurred, were quickly controlled
  - Beaches posted, Health and Ecology informed, normal water quality levels returned shortly

# Wastewater system resumed normal operation within 12-24 hours

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- All four CSO plants were operating for several days – during and after the Dec. storm
- Widespread but less severe impacts included:
  - South Plant - Power surges affected Co-Gen control systems
  - High flows necessitated blending, but system operated normally